WHAT IS CLAIMED IS:

1. A method for fabricating a sensor on a substrate having a pair of electrodes, said method comprising:

depositing a first layer of conducting material onto said substrate having a pair of electrodes; and

depositing a second layer of polymer film onto said first layer of conducting material thereby fabricating said sensor.

2. The method according to claim **1**, wherein said conducting material comprises carbon black.

3. The method according to claim **1**, wherein said deposition of said conducting material is by aerosol spraying.

4. The method according to claim **2**, further comprising drying said carbon black before deposition of said second layer.

5. The method according to claim **2**, wherein said carbon black layer has a thickness between about 0.01 micron to about 10 microns.

6. The method according to claim **5**, wherein said carbon black layer has a thickness between about 0.1 micron to about 1 micron.

7. The method according to claim **1**, further comprising depositing said first layer of conducting material through a mask.

8. The method according to claim **7**, wherein said mask comprises a plurality of apertures.

9. The method according to claim **1**, wherein said deposition of said first layer of conducting material comprises robotic amateur.

10. The method according to claim **1**, wherein said deposition of said second layer of said polymer film comprises robotic amateur.

11. The method according to claim **1**, further comprising depositing said second layer of polymer film through a mask.

12. The method according to claim **11**, wherein said mask comprises a plurality of apertures.

13. The method according to claim **1**, further comprising processing said second layer of polymer film after depositing upon said first layer of conducting material.

14. The method according to claim **13**, wherein said processing is a member selected from the group consisting of vacuum processing, photo-active polymerization and cross-linking.

15. The method according to claim **1**, wherein said sensor is an array of sensors having a first sensor and a second sensor.

16. The method according to claim **15**, wherein said first sensor is compositionally different than said second sensor.

17. The method according to claim **15**, wherein said first sensor has a different polymer film layer than said second sensor.

18. The method according to claim **1**, wherein said substrate comprises a dielectric material.

19. The method according to claim **1**, wherein said substrate further comprises a member selected from the group consisting of a heater, a thermistor and a combination thereof.

20. The method according to claim **1**, wherein said substrate further comprises a member selected from the group consisting of a temperature probe, humidity probe and a combination thereof.

21. A method for fabricating a sensor on a substrate having a pair of electrodes, said method comprising:

depositing a first layer of conducting material onto said substrate having a pair of electrodes to form a substrate having a conducting material disposed thereon;

processing said substrate having a conducting material disposed thereon to remove any solvent;

depositing a second layer of polymer film onto said first layer of conducting material to form a fabricated sensor; and

processing said fabricated sensor to cure said second layer of polymer film.

22. The method according to claim **21**, wherein said sensor is an array of sensors.